

Houghton-le-Spring.

10th February 1896.

To the Rural District Council of Houghton-le-Spring.

Mr Chairman and Gentlemen,

It is again my duty to lay before you my Annual Report for the year ending December 31. 95.

Accompanying my report are the tables "A" and "B" arranged by the Local Government Board; the former relating to the deaths, classified according to diseases, ages and localities and the latter to the New Cases of Sickness that have occurred during the year.

Deaths. It will be seen from table "A" that 252 deaths have been registered in this division of the Union, but as I have ascertained that 2 of the 13 deaths which took place in the Union Workhouse occurred to persons belonging to this division of the Union, the deaths upon which the mortality must be based becomes increased to 254 as the Local Government Board directs that all such deaths must be taken into account in estimating the mortality.

Of the 254 deaths, 121 occurred to children under the age of five years and 133 to persons above that period of life.

If we estimate the population at the middle of the year as required by the Local Government Board at 13,940 this is equivalent to a death rate of 18.2 per 1,000 per annum and an infant

mortality of 47.6 per cent as against 16.9 and 50.6 respectively for the previous year.

The following table shows the rates of mortality for the last four years —

Year.	Death-rate per 1,000 per annum.	Infant Mortality.
1892	19.5	40.09
1893	22.95	50.8
1894	16.9	50.6
1895	18.2	47.6

The 137 deaths included under "all other diseases" and not provided for in any of the forms of the Local Government Board were due to the following causes, viz:—

Scrofulous diseases	6
Cancer	6
Dis. of the Nervous system	18
Convulsions	15
Apoplexy	20
Dis. of the Digestive Organs	19
Dis. of the Urinary Organs	4
Childbirth	3
Premature birth	20
Old age	19
All other diseases	<u>7</u>
	<u>137</u> Total.

The following table gives the death-rate per 1,000 from the principal zymotic diseases including Phthisis and acute diseases of the lungs for the last two years —

	Diseases	1894	1895
1.	Small Pox.	"	"
2.	Scarlet fever.	.21	"
3.	Diphtheria & Membranous Croup.	.14	"
4.	Typhoid & Continued fevers.	.58	.65
5.	Measles.	1.01	"
6.	Whooping Cough.	.36	.21
7.	Diarrhoea & Dysentery.	.21	.93
8.	Phthisis.	1.3	1.3
9.	Acute dis. of the lungs.	2.9	2.9

Births. The births for the year number 507 -

256 Males

251 Females

which is equivalent to a birth-rate of 36.3 per 1,000 per annum and a natural increase to the population of 253.

The subjoined table gives the number of births - male and Female - including birth-rate for the last four years -

Year.	Total Births.	No. of Males.	No. of Females.	Birth rate.	Natural increase.
1892	446	255	221	36.3	214
1893	538	281	257	32.3	227
1894	562	291	271	40.9	329
1895	507	256	251	36.3	253

New Cases of Sickness. Table "B" of the Local Government Board, as I have said gives the population and births and the New Cases of Sickness coming to the knowledge of the Medical Officer during the past year.

I am unable, however, to apportion the births to the various townships as the Registrar does not furnish me with the necessary information; nor am I able to estimate the population of the different parishes as required by the Local Government Board and to give the death-rate appropriate to each. The deaths are of course properly localised in the returns of the Registrar, not so the births, however, the number occurring in the whole district is simply given without reference to the parishes in which they occur.

Infectious Disease Notification Act.

This Act has been in force in this Division of the Union since January 1890.

On receiving the Notification forms it is my invariable practice to visit and inspect the premises occupied by the patients with as little delay as possible and to give such instructions as to isolation and disinfection as the exigencies of the case may require.

In a large majority of the cases, however, isolation is practically impossible as every one knows who has any personal knowledge of the district.

Our population consists chiefly of the working class, and as our birth-rate shows we are a child-bearing population so that the accommodation in most cases is quite inadequate for the purpose of isolation.

Your inspector makes an independent inspection on his own account and acquaints me with whatever defects he is able to discover.

Disinfectants. These are supplied free of charge and your inspector himself often superintends their use.

Disinfectant apparatus. We have a portable disinfecting apparatus which we use on all possible occasions, but notwithstanding the fact that all disinfection is done free of charge there is considerable prejudice against it and we have to move in this matter with great discretion. We are however, making progress as the minds of the people are becoming more enlightened as to the necessity and efficacy of disinfection.

Infected houses. These are frequently fumigated with sulphur and otherwise cleansed.

Hospital accommodation. We have an Infection Hospital which is built of corrugated iron and situate in a very central and desirable part of this division of the Union. It has three wards each of which has four beds. Thirty cases of Typhoid fever and one of Scarlet fever have been treated in the hospital since its erection in 1893.

Infectious cases. The subjoined table gives all infectious cases that have been notified under the Infectious Disease Notification Act during the past year:—

90 Typhoid fever.

32 Scarlet fever.

15 Erysipelas.

7 Diphtheria.

144

as against 171 for the previous year, viz:—

44 Typhoid fever, 95 Scarlet fever, 1 Puerperal fever, 1 Continued fever, 20 Erysipelas and 9 Diphtheria.

The total number of cases reported during the year therefore is less than for the previous year although the number of Typhoid fever cases is twice as large.



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1895.	Typhoid		Scarlatina		Erysipelas		Diphtheria		Total
	under	over	under	over	under	over	under	over	
January		2				1		2	5
February		6	3	5	1	4		1	20
March		5		4					9
April		1	1	2		1		1	6
May		1				1			2
June						2			2
July		1		2					3
August		6						1	7
September	1	7		4		1			15
October	3	30	3	5		1	1		40
November	4	4	3	2		1			24
December	2	2		1		2		1	13
Total	10	50	10	22	1	14	1	6	144
		90		32		15		7	

Scarlet Fever. With the exception of January, May and June we have had cases of this disease in every month during the year. It never assumed anything like the form of an epidemic and the disease itself was most mild in character as is shown by the fact that not one of the 32 cases had a fatal termination. Indeed, so mild was the disease and so uncertain and ill-defined was the eruption when visible - for at times it was so evanescent as to escape the most practiced eye - that it was of no use as a means of diagnosis, so that in many of the cases the true nature of the illness was only revealed by the subsequent desquamation of the skin.

Diphtheria. Only seven cases, or two less than last year, have been reported. This is very gratifying considering the amount of sickness

we have had from this disease both here and in other parts of the Union during the last few years. In connection with the West Herington case nothing defective could be found.

One of the four cases reported from Newbolds Parish was evidently imported from Sunderland while in connection with the remainder I could discover no apparent sanitary defect although one of the children had been visiting at a neighbour's house where a child was suffering from Scarlet fever.

The two cases at Tenshaw occurred to members of the same family and the house drain was defective. Erysipelas. The cases of this disease were all, more or less, of a septic character and only in the cases did I find anything defective with the houses or outbuildings. In two the ash pits and privies were overflowing and in the third the yard drain was out of order. Five of the cases were in all probability the result of accidents.

Typhoid fever. As I have repeatedly remarked gentlemen, this is a filth disease - one of those diseases which owe their origin to faulty or defective sanitation and which under ^{Certain} conditions may be looked upon as a preventable disease. The presence or absence of this disease enables us to form a rough and ready estimate of the sanitary condition of a district. It is also a seasonal disease, that is, it is more liable to break out at certain periods of the year than at others, and usually reaches its climax by the month of October when it begins to decline. By a perusal of the table which I have prepared for the purpose it will be seen that its rise and fall during the year was precisely what we might have expected from our knowledge of the season.

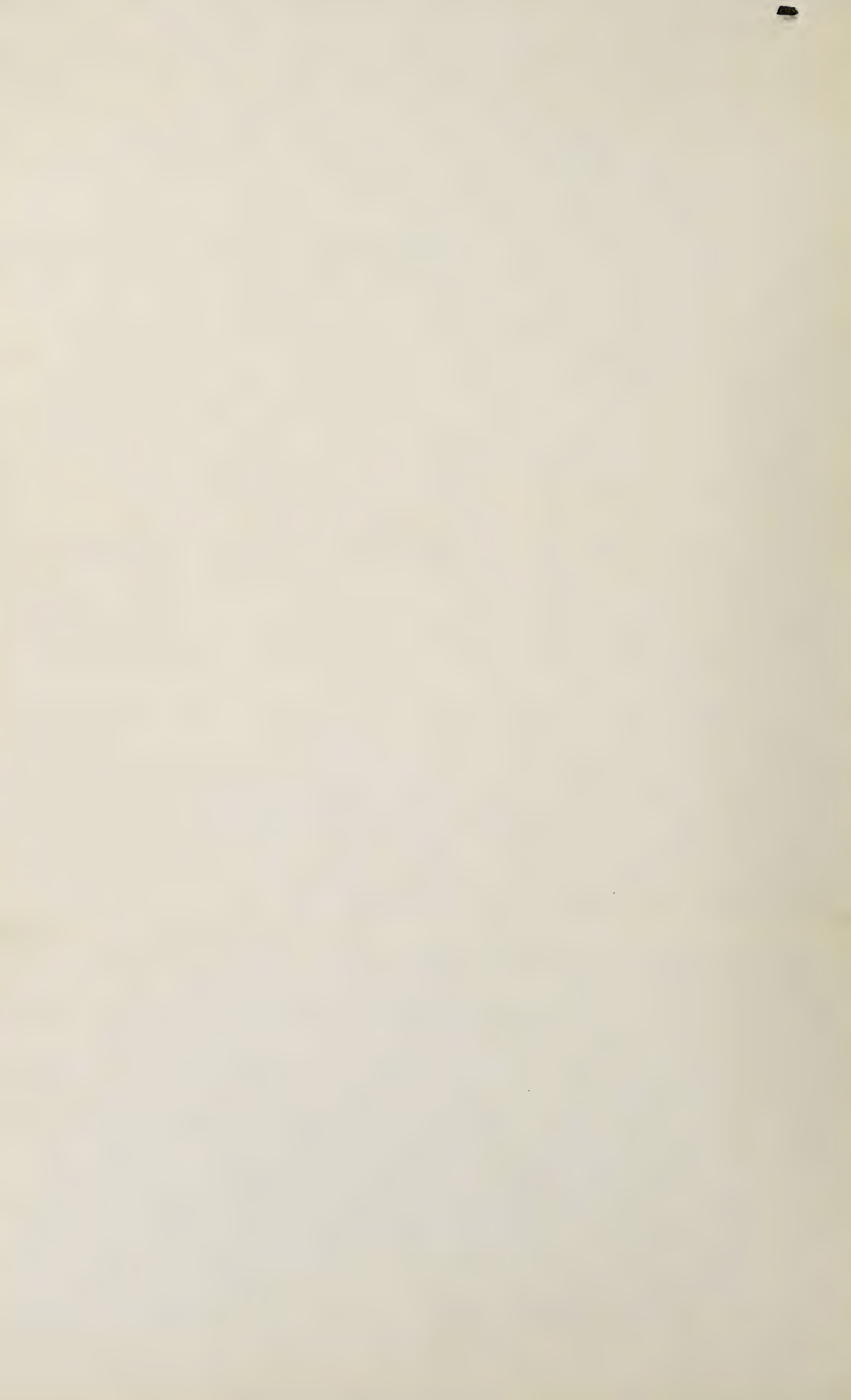
The sanitary defects found in connection with some of the houses occupied by the patients might account for some of the cases, but certainly not all. The disease was scattered pretty uniformly over certain parts of the district while others enjoyed a complete immunity from the disease, such as; Wellington Row, Philadelphia; Travis St, George St. East and Old West Row, Newtetterington; Front St, Britannia Terrace, William St, Hurmlen St, and Current St, Bank Head; New Penrhaw; Success and Long Row and Chapel Row, Shingy Row, &c. &c. This is alike interesting and important as showing that our drinking water was in no way responsible for the outbreak of the disease and as the affected families were obtaining their milk supply from the various milk sellers in the district, many of whom supplied milk in the non-affected districts as well, we may safely assume that the milk was in no way responsible for the outbreak.

The marked increase of the disease from September to the end of the year is difficult to explain.

Although the weather was singularly favourable for the production of those conditions which tend to the propagation and spread of the disease, still, after making full allowance for those exceptional conditions it must be confessed that the sickness from this disease is much in excess of what it should be.

With a new system of sewerage with gradients favourable for the rapid transit of the sewage, there is no reason why we should suffer more from this disease than other districts of a like size and population.

As you are aware, gentlemen, Typhoid fever has been so prevalent in this Union yet some years back



that the Registrar General felt it his duty to comment on the fact in his report for 1893.

The notable features of the outbreak were & the almost entire absence of anything like Diarrhoea in the patients, the persistent head-ache and the acute colicky pains in the abdomen which came on at varying intervals and prevailed more or less until the crisis was reached and the intense infectiousness of the contagium.

It is a common error to suppose that Typhoid fever is not infectious. During the past year 39 cases occurred in 13 houses within an interval of a few weeks and ranged from 2 to 7 in one family. This to my mind shows how infectious the disease may become where there is insufficient air space and ventilation as is generally the case in all cottage property.

As I have already said 38 cases have been treated in the hospital since its erection in 1893 and only in one instance has a subsequent case of the disease occurred in any of the houses from which the patients were removed; and in this case I do not for a moment imply that the disease was contracted from the patients on their return home.

The facts are these. The two patients, brother and sister, were treated in the hospital for something like two months and it was not until one month after their return home that another member of the family was laid up. Meanwhile, however, the family had to leave their old house to allow some necessary repairs to be carried out and next door to their new residence three cases of the disease existed and it was noticed and commented on by the neighbours at the time that these children were constantly playing in the privy used by the

newcomer and in this way I have no doubt the subsequent case arose.

This in itself, proves the efficacy of isolation and had all the primary cases been removed straight to the hospital in place of being treated at home and thus prove a source of danger to the other inmates, much of the suffering and loss of life which subsequently occurred might have been avoided.

The following is a list of the defects found in connection with some of the cases:—

Open and offensive ashpit.

Offensive ashpit.

Damp house and offensive smell.

Privy and ashpit overflowing.

Contents of privy & ashpit percolating.

Overcrowding and dirty house.

Offensive smell in yard.

Offensive yard drain.

Offensive privy.

Damp house.

Smell from street ventilator.

Small pox. No case of small pox has been reported during the year, and Typhus fever, Relapsing fever and Cholera have never once been in the district during the 15 years I have held Office as your Medical Officer of Health.

These are all the diseases that have been notified under the Act during the past year.

There are other forms of sickness, however, which, although not included by us under the Notification Act, are still of importance as bearing upon the Public Health of the district.



My only source of information with regard to those diseases is my own practice, as the medical men of the district are under no obligation to report them.

Measles. We have been singularly free from measles during the past year. Only some six cases have come within my knowledge all of which were mild in character and free from complications.

Whooping Cough. During the last quarter of the year an epidemic of Whooping Cough prevailed in the Herrington and Penrhaw districts and resulted in three deaths.

Diarrhoea. During the months of August and September a very severe epidemic of diarrhoea prevailed all over the district. The young and old were alike affected and the deaths from the disease have seriously augmented the death-rate. The severe cases were characterised by vomiting, cramp in the legs and body generally and great prostration. So exceptionally trying was the weather during this portion of the quarter, owing to the intense heat, that butcher meat, fish, milk and the like were rendered almost unfit for use in the course of a few hours. Infants and young children brought up on the bottle necessarily suffered most as in their case the diarrhoea and sickness resulting from the altered condition of the milk - which I need hardly say is the natural food for the young - were most difficult to combat. The drains and sewers too, were very offensive, as were also the ashpits and privies owing to the active putrefactive change that was taking place in their contents.

Chicken Pox. Only 4 cases of this disease have come to my knowledge during the year all of which were mild in character & free from constitutional disturbance.



Influenza. During the months of January and February and again in November and December we had a few scattered cases of Influenza but on no occasion did the disease exhibit any of the more symptoms which characterized the previous epidemics. It for the most part or without a slight frontal headache and nasal catarrh which usually lasted for a few days and soon subsided - even among the most susceptible.

Trachoma & Ect. Three cases of Trachoma I have had come to my knowledge. They were all of the ordinary type and were brought about by exposure to cold.

Throat. One man who came to my office quite ill and I am not aware of any disease having been contracted by it - no. Samples are taken from some is taken by the physician under the County Council but I am not aware of any connection having been determined.

Measles. The small pox for this has been up to the number of previous years.

Foot and Mouth. For nothing would this be taken by the County Council.

The specimens from November 1890 and the Public Health Act Amendment Act of 1890 are both adopted by your authority.

Drinking water. The drinking water of this division of the Union is mainly obtained from the Grass Hill or Harrold and Parnham Water Supply Company (Houghton water) and the (Solihull) Water. The quality of the water from the Grass Hill and the Solihull has never once been questioned but the quality and quantity of the water ^{have} been

that the water of the Newville Company is subject to intermittent pollution.

During the past year, however, the reports of the County Council have been highly satisfactory as the appended reports will show.

By a standing order of your authority the drinking water is analysed every six months.

Upon the whole the supply of water throughout the district has been good although at Bankford and North Sunnyside owing to some defect in the service pipes the supply in April and June was far from satisfactory. To increase the pressure at Bank House and secure a more uniform and regular supply a large storage tank was erected. This has had a very beneficial effect and with the valve street taps which are being erected the requirements of the inhabitants should be amply provided for.

East and Middle Berrington respectively deriving their water supply from the Belling Well. The cart goes round the village three times a day and will continue to do so until the scheme for bringing a new supply of water is carried out.

The water supply to the "Pains Tile Sheds" cottages near Bilkeworth Belling is now under the consideration of your authority.

The people of Coagreen derive their water supply from the "Alice Well"; the water from the "Laurey Well" is simply used for washing purposes. As the analysis shows the water from the Alice Well was polluted, but the pollution was due to the field pipes through which the water was conveyed; these were taken up and replaced by a metal pipe and the spring itself was properly washed round and cemented, so that the water is now pure and wholesome and much prized by the inhabitants who look upon it as

possessing extraordinary virtues. The "Cuning Hall" has been raised and raised round so that in wet weather the surface water is prevented from entering it. This has been done at the request of the inhabitants who were anxious to obtain the water, as unlike the water from the "Blue Hall" it is free from all traces of iron and is therefore more suitable for washing purposes.

Sanitary remarks. During the past year a large amount of sanitary work has been carried out in this division of the Union, and although the amount spent by the representatives of the Board of Durham is not so large as for last year, still, £7,011.1.4 - the sum actually spent - is an evidence of the desire on the part of the Colliery proprietors to meet their responsibilities in properly sanitary and proper and commendable spirit.

The wear and tear in property of this class is very great and a large staff of workmen is constantly employed to keep abreast of the work, and this upon the whole is fairly well done.

The following is a list of the improvements required to:-

Sanitary. The privies and ashpits in South Row have been taken down and rebuilt and the road between the South and Middle Row has been excavated and properly done up. The footpaths for the three Rows have been levelled and channelled and new drains have been laid down to carry off the surface water. The roofs of the houses and out-offices have been done up. The heating has been thoroughly overhauled and the doors and windows have been repaired. Brick cesspools have been built at the bottom of the Rows and street gullies have been fixed in all the streets.

Kennington. Thirty kitchen floors have been taken up and resaid with cement in order to remove dampness. Fifty yards have been laid with brick and the paths as well as the yard and privy doors in George St. East street and Catherine Terrace have been repaired. Sixteen sky lights have been fixed to bed rooms in Fitzgibbon Row, Bridge Row and Old Fleet Row for thorough ventilation. New drains have been added to houses No. 2 and 3 West Row and additional balconies with sky-lights for ventilation have been added to two houses in Bridge Row East and West Row, Bridge Row, Fitzgibbon Row, George St and Catherine Terrace have been raised, channelled and drained and provided with the necessary street grates.

Philadelphia. Shop Row and Chapel Row have been drained and sinks provided for the houses. New coal-houses have been built for 46 houses in Chapel Row and Shop Row and an extra room has been added to a house in Rat Row. In Shop Row two houses have been provided with an extra room each with sky-lights for ventilation. The doors and windows in Shop Row and Chapel Row have been repaired.

Mill Pit. A house at Mill Pit has been provided with a privy, coalhouse and a ventilating skylight.

Shinny Row. A house in Rye Yard has been taken down in order to provide conveniences to Long Row. The top of Long Row or Rye Yard has now been provided with out-offices; the back street has been done up; new drains and sinks have been provided and the footpath has been paved, raised and channelled and a one-roomed house has been replaced by a five-roomed house. Two houses in Chandler Row have been raised and additional

rooms added. New conveniences have been provided for 12 houses in Chapel Row and the street has been properly formed.

Penshaw Stables. New out-offices have been provided and the footpaths have been paved, kerbed and channelled and the spouting extended to.

Old Penshaw. A house behind the Ship Inn was pulled down and rebuilt and provided with conveniences. A large house was converted into a Reading Room and three houses. Three houses were provided with coal houses and one with an extra pantry. Two old houses in Penshaw Square were pulled down and are now being rebuilt.

New Penshaw. The roads are being re-made, drains kerbed and channelled.

Bunker Hill. The drains have been taken up and rebuilt and disconnecting chambers have been put into each house.

Junction Row. In connection with these houses the ceilings have been re-plastered; the scuppers and privies have been done up and ventilated, the spouting overhauled and extra pipes added.

Newville:- North Back Lane:- Two wash houses and four coalhouses have been provided for houses in this Lane.

South Back Lane:- A privy and coalhouse have also been provided for houses in this Lane. A house was converted and raised and provided with ventilators in the roof and two houses were provided with attics and roof ventilators.

Success. The street has been drained, kerbed and channelled and street grates added. A house at Old Success has been converted into two and an additional workshop has been added to the property.

17.
Other sanitary work of equal importance has
been carried out by order of your authority.

In the month of March I inspected 4 houses in
Kirkcaldy's Yard, Newbottle, at the request of your
authority. The houses were all more or less damp
owing to a defective gutter at the back of the houses.
The same defect was offensive and was ordered to be
repaired in and additional privies to be provided.
These orders were satisfactorily carried out.

Along with your inspector I also inspected 4 houses
in Dockin Yard and Pottery Yard, Newbottle.

These were without privy or toilet accommodation
and although sanitary defects of a more or less
trifling character were found, the houses upon the
whole were fairly good for property of this kind.

Privy toilets were provided and the necessary repairs
were carried out to the satisfaction of your authority.

In the month of August I received a communication
from the Penrith Parish Council with regard to
five houses at Mill Pit owned by R. R. Wylson
and four at Penrith Place owned by J. Millison
and eight at Mill Gaith owned by John Lowe.

The houses at Mill Pit were all more or less damp,
caused by defective roofs; some of the windows and
doors required doing up and additional privy toilet
accommodation was required, as there was only one
privy and toilet for the five families.

The recommendations of your authority were
satisfactorily carried out with the exception of the
back road which is now in progress.

With regard to the other houses they were all more or
less in the same condition, but as I made detailed
reports to your authority at the time I do not think
it necessary to go into particulars again especially
as all the recommendations of your authority

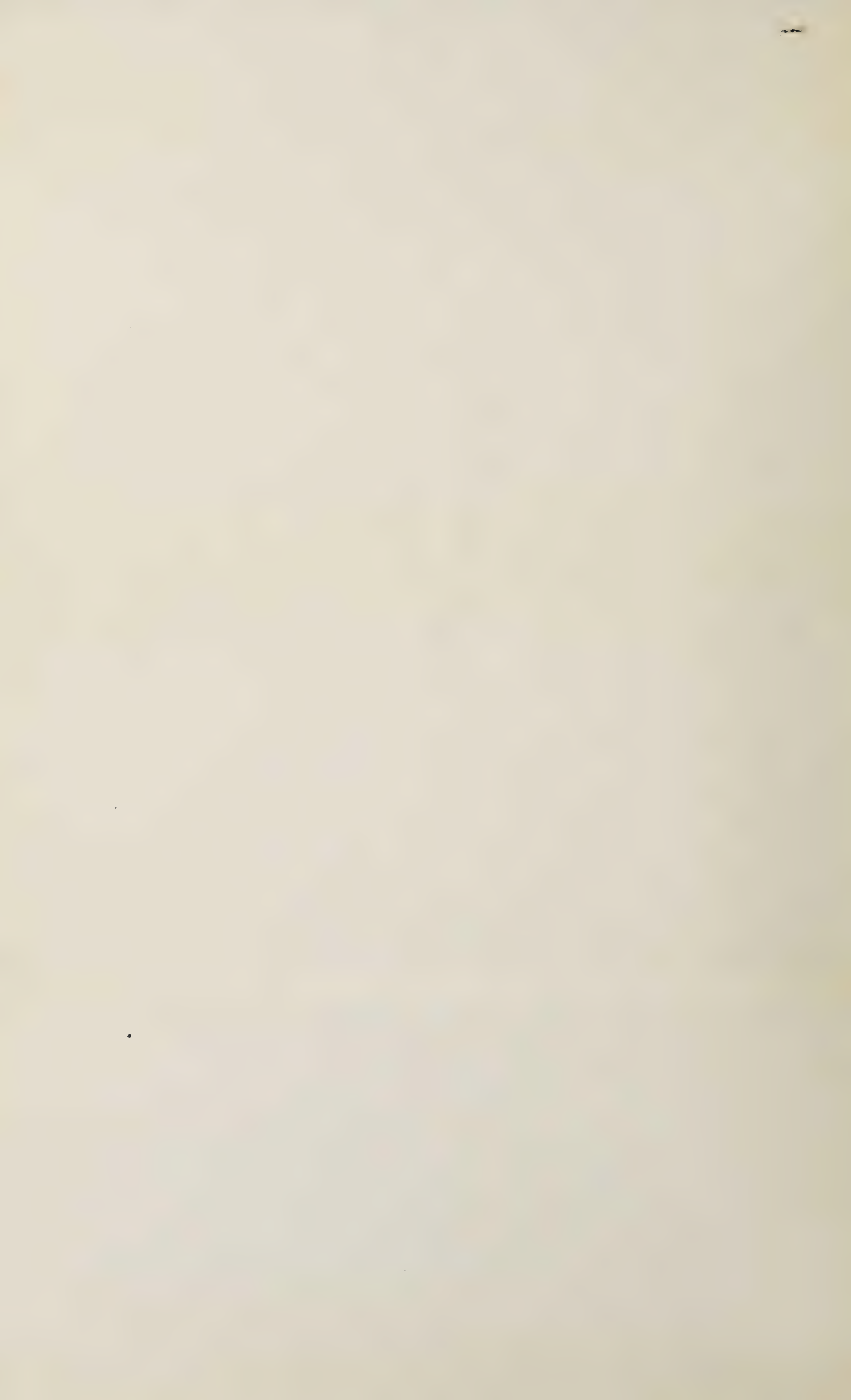
have been carried out.

In September as requested by your authority I inspected three houses at Old Penrhaw belonging to William Winkler. One of the houses was converted into two dwellings by nailing up the middle door thus doing away with side through ventilation. All the houses were damp and were without privy or hospital accommodation. In this case notice has been served by your clerk under the Housing of the Working Classes Act 1890.

I also inspected a four roomed tenement house close to the above property and owned by Alice Dillie and Nicholas Forster. This house was also damp and although the four families were without, day hospital accommodation, they had permission from the landlord of the "Ship Inn" close by, to use his out-office. In this case notice has also been served under the Housing of the Working Classes Act 1890.

On October 31st during my inspections of the Dairies and Cowsheds in the district I came across an animal suffering from acute Tuberculosis. Mr. Peel, veterinary surgeon, Durham, examined the animal along with me. The animal was at once removed from the byre and the milk was ordered to be destroyed.

Bank Road. The ash pits and privies in Hopper St., William St. and a portion of George St. and Thornton St. — which were of bad construction and immediately under the bed-room windows, have been taken down and replaced by improved privy vaults. This is a decided improvement and has given much satisfaction to the inhabitants — who however were unnecessarily inconvenienced by the wholesale way in which the old out-offices were demolished and the slow progress made with the



new ones. About 2 or 3 have been down at
town and the new ones have been ^{used} ~~made~~
started with, little or no inconvenience would
have arisen, but as I have said, nothing was so
people seriously inconvenienced but a very
wonderfully and disorderly state of things was the
inevitable result.

An old open school in the village of Kibbory
was closed at the request of the inhabitants. It was
simply a nuisance. Not long passed to be of any
value to the village.

Boat repair. New party whiffs have been provided
for 12 houses in this village. Another property has
been repaired and the "Royal William Inn" has
been completed at the back and sides and provided
with new stables. This has greatly improved the
property which is now standing on a satisfactory
condition. Some of Lord's property has also been
repaired and the remainder will be started with
in the Spring.

New Houses. During the past year fourteen
plans have been approved for 20 houses including
alterations in this division of the town.

Town nuisance is still improved, and the
district, but upon the whole it is removed with
greater regularity.

Overcrowding. Town cases of overcrowding
have been reported all of which were visited.
The owners of two houses in Newbottle had to visit
these towns in order to comply with the notice
of your authority.

Housing of the Working Classes Act 1891.

Notices issued under the Housing of the Working
Classes Act 1891 for the year ending 31st March.

District.	Owner.	Result.
4 houses at Congreen	Lord Durham.	Notice requiring work.
3 " " "	James Mather.	— do —
3 " " "	Thompson Mather.	Notice requiring work.
2 " " Donohew	Ellie Bell.	Notice requiring.
2 " " "	Nicholas Jordan.	— do —
3 " " "	W B Winstanley.	— do —

Proceedings were ordered by the Council to be taken against A. Taylor, owner of 4 houses at Newbottle, Ervinger Heolop, owner of 3 houses at Newbottle and Lord Durham owner of the Royal William Inn at Congreen to put their property into a sanitary condition. Before the notices expired the necessary repairs were carried out.

Lodging Houses. We have no registered common lodging houses in this division of the Union.

Dairies and Milkshops. These are regularly inspected and are usually kept in a clean and satisfactory condition.

Cowsheds. The buildings are generally of a superior class and the bye-laws relating to cleansing and lime-washing are carefully observed. The byre, in which the cow suffering from Tuberculosis was found, was an exception. It was dirty and badly kept and owing to some error on the part of the owner the premises were not registered. The offender was written to by your clerk and the necessary license was at once taken out. At the Plims farm near Bickworth, the farm house and byres are dilapidated and are about to be rebuilt.

Slaughter house.

In no instance has it been necessary to call the attention of the owners to the dirty or insanitary condition of their slaughter house. The offal and other refuse is at once removed from the premises so that everything is kept clean and orderly.

Scavenging.

Upon the whole the scavenging has been fairly well carried out, although complaints have been made to your authority of the careless and irregular way in which some of the carts have been emptied. At South and North Burnside some of the carts were overflowing and the privy contents pouring out into the yard. It was said by the occupants that they had not been cleaned out for 6 weeks.

This was a very serious state of things and occurring as it did during the hot weather when the fever epidemic was breaking out, it is impossible to say how much of the fever owed its origin to this cause, as in the South Row seven cases occurred in the badly scavenged houses - Nos. 3, 5 and 6 while in the North Row eight cases occurred in Nos. 21, 24 and 26 all of which were also badly scavenged. As proper and efficient scavenging is of the first importance in protecting the health of the community, the strictest supervision should be exercised in order to see that the contractors do not shirk their work as the close proximity of the out-offices to the houses would greatly intensify the injurious consequences that would be certain to result from the imperfect and irregular emptying of the carts and privies.

Death-rate. During the four quarters of the year the death rate has been fairly uniform and but for the epidemics of Diarrhoea, Whooping Cough and Typhoid fever it would have been much lower than it is. 16.2 is not a high death-rate and when we remember that we are a child-bearing population it cannot be looked upon as other than satisfactory even although the death rate would one year per 1,000 registered births, viz. 19%, is about the average for England and Wales. Altogether the public health of the district may be considered highly satisfactory.

I have the honour to be,
 Mr Chairman & Gentlemen
 Your obedient servant,
 J. P. Ash
 Medical Officer.

County Council's Office.

Durham.

12th June 1895.

To Mr. W. W. Miller,

Sanitary Inspector,

Boughton n. Spring.

I hereby certify that I have analysed a sample of water marked "No. 1" which I received from you on the 6th June 1895, and that I find it follows:—
(No. 1. from the Grass Hill, Newbottle.)

Water Temperature in 4 ft. tube — 62° F. and when

drawn from bottom of 100' tube. — 51° F. and when

drawn from surface.

Chlorine as Chloride 2.2400

Nitrogen as Nitrate . 2707

Ammonia none

Albuminoid ammonia none

Oxygen absorption . 3.390

Injurious residue none

Total dissolved matter (solid)
in 240' tube } 36.2000

Calculation } Slightly impure.

Conclusion.

The water is, in my opinion, a good and wholesome sample of drinking water.

W. D. Keating Esq. F.R.C.

Counry Analyst's Office,
Darlington.

12th June 1895.

To Mr Hⁿ Morley,
Sanitary Inspector,
Moughton-a-Spring.

I hereby certify that I have analysed a sample of water marked "No. 2" which I received from you on the 6th June 1895 and that I find as follows:-
(No. 2. From tap opposite Post Office, Newbold.)

Colour & appearance in 2 ft. tube — Colourless & clear.

Odour when heated to 100° Fahr. — Earthy.

Gains per Gallon.

Chlorine as Chlorides 3.1150

Nitrogen as Nitrates .0135

Ammonia none

Albuminoid ammonia none

Oxygen Absorption .0126

Injurious Metals none

Total Solids matter dried
at 220° Fahr. } 58.1000

Microscopical
examination } Satisfactory.

Observations.

I am of opinion that the sample is a good and wholesome sample of drinking water.

W. J. Keating Esq. D.S.C.

County Analysis Office.
Darlington

12th June 1895

To Mr H^o Miley,

Sanitary Inspector,

Boughton-a-Spring.

I hereby certify that I have analysed a sample
of water marked "No. 3." which I received from
you on the 6th June 1895 and that I find as follows:
(No. 3. From tap near Post Office, Philadelphia).

Colour and appearance in 2 foot tube.	Colourless and clear. Faintly earthy.
Odour when heated to 100° Fahr.	Grains per Gallon.
Chlorine as Chlorides	1. 3 2 00
Nitrogen as Nitrates	. 2 0 18
Ammonia	None
Albuminoid Ammonia	None
Oxygen Absorption	. 0 1 12
Injurious Metals	None
Total Solid Matter dried at 220° Fahr.	31. 5 000

Microscopical
examination } Perfectly satisfactory.

Observations.

The sample is, in my opinion, a good and
wholesome sample of drinking water.

W. J. Keating, Esq., F.I.C.

Causes of the ...

...

...

The ...

...

...

Having analyzed the ... of ...
... the 21 June 1888 ...

... yellow ...

...

... 2.070

... 98

... 99

... 23

... 42

...

... 1.000

Microscopic
...

Exams from ...
considerable ...
Mammal matter ...
suspicious ...

Conclusion

From a specimen that the ...
... it is not a ...
... drinking water

W. F. ...

"No. 4". Causey Well, Co. ...





County Analytic Office,
Burlington.
20th July 1895.

To Dr. W. B. Park,

Medical Officer,

Houghton & Spring.

I hereby certify that I have analysed a
sample of water furnished to W. B. Park, Houghton & Spring,
which I received on the 15th July 1895,
and that I find as follows:-

Colour and appearance, Colourless when seen but
in 2 ft. cube. Turbidity none present.

Specific Gravity 1.000.

Odour when heated to 100° Fahr. - Not marked.

Taste, faintly sweet.

Chlorine as Chlorides 2.5000

Nitrogen as Nitrate none

Ammonia none

Aluminium as Alumina none

Oxygen as Oxygen none

Total Solids as matter dried
at 220° Fahr. } 24.4000

Microscopic { This is satisfactory apart from the
contamination { deposit of hyaline material of dense,
globular nature.

The sample is apparently for a good purpose. Some of the
but the hyaline is due to the action of bacteria by natural
processes. It is not in this case, perhaps, very important to the
by it is possible to remove the impurity and concentrate a deposit
of water of pure water, in my opinion, to the degree of
saturation to the use of this water for drinking water purposes
domestic purposes.

H. S. Keating, Analyst, D. S. O.



Rainfall in 1895
at Houghton & Spring
in the county of Durham.

ft.

Rain Gauge { Diameter of Funnel
 { Height { Above ground 1
 { of Fun. { Above sea level 261

Month.	Total Depth, inches	Greatest fall in 24 hours		No. of days which it or more fell
		Depth.	Time.	
January	2.26	1.05	29	22
February	2.00	.85	248	2
March	2.22	.60	98	16
April	1.78	1.01	254	11
May	.41	.16	48	4
June	2.27	1.44	261	20
July	2.73	1.25	256	24
August	4.11	1.92	42	16
September	.33	.15	66	1
October	5.80	.25	156	18
November	2.20	.37	58	20
December	1.70	.31	308	15
Total	32.96	9.35	—	182

Signed

B. Bullock June 1896



After completing my report I received a list of persons who have died in the Durham County Lunatic Asylum during the past year, who formerly belonged to this Asylum of the Union. As the death rate is based on the population estimate at the middle of the year, notice must be taken of only two deaths, as just the reduction of death rate from 18 2 to 18 1 and the death rate to 18 2 instead of 18 1 as given in the table:

Name of Person.	Date of Admission.	Date of Death.
Brooks Catherine	April 11 th 1892.	May 5 th 1895.
Fawcett Mary	Nov ^r 11 th 1892.	March 5 th 1895.
Jane John	July 1 st 1893.	Aug. 7 th 1895.
Stockport Maria	Sept ^r 13 th 1893.	Sept ^r 16 th 1895.

J. H. Park.



Prothetin

District; classified according to

[illegible]

Since when? January 1890
State here the name of the Isolation

Besides the above-mentioned Diseases, insert in the columns with
 sed by the sick of the District. Mark (H) the Locality in which

NOTES ON TABLE **B.**

(See also Notes on back of Table A.)

NOTE 1. The present *Table B.* is concerned with population, births, and sickness (not with mortality) in the district or division to which the Table relates.

2. As stated in the heading of Col. (a), *Public Institutions* should be regarded as separate localities, and the new cases of sickness in them should be separately recorded. Workhouses, Hospitals, Infirmaries, Asylums, and other establishments into which numbers of people, and especially of sick people, are received, are Public Institutions for the purpose of these statistics.

3. *Comments on any unequal incidence of notifiable disease upon the several localities, and considerations as to the local incidence of consumption and other prevalent diseases, should be made in the text of the Report.*

(A)

TABLE OF DEATHS during the Year 1893, in the Rural Council of Houghton & Spring District, classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (See note 4 on back of sheet.) (Columns for Population and Births are in Table B.) (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.								MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																						
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)	(i)	1	2	3	4	FEVERS.					10	11	12	13	14	15	16	17	18	19	20	21	22	
									Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued	Relapsing	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia and Pleurisy.	Heart Disease.	*	Injuries.	All Other Diseases.	TOTAL.	
																															5
Berrington E.M.	5	2				1	2	Under 5 upwds.																					2	3	2
Berrington West	62	25	3		5	15	14	Under 5 upwds.						1															21	14	25
Morton Grange	3	1	1				1	Under 5 upwds.																					1	1	
Newbottle	111	49	11	3	4	22	19	Under 5 upwds.						1	6														41	22	66
Sperton	4	2		1		1		Under 5 upwds.																					1	2	2
Penrhos	58	19	6	1	1	23	8	Under 5 upwds.							1														15	10	25
Wilberworth	8	1			3	3	1	Under 5 upwds.																					1	4	4
Warden Law	1	1						Under 5 upwds.																							1
TOTALS	252	100	21	5	16	65	45	Under 5 upwds.							1	8				3	11	2	1	19	24	14		1	81	56	121

The subjoined numbers have also to be taken into account in judging of the above records of mortality. See Note 5 on back.

Deaths occurring outside the district among persons belonging thereto.	2							Under 5 upwds.																						1		2
Deaths occurring within the district among persons not belonging thereto.	2							Under 5 upwds.																						1		2

* The heading of column 19 is left blank for the insertion of Influenza, or any other disease which it may be thought desirable to record.

NOTES ON TABLES A AND B.

NOTE 1. *Medical Officers of Health of "Combined Districts" must make a separate Return for the District of each District Council.*

2. *Medical Officers of Health acting for a portion only of the District of a District Council should write, in the heading of the Table, the designation of the Division for which they act.*

3. *The words "Urban," "Rural," or "Metropolitan" must be inserted in the appropriate space in the heading, according as the District is Urban or Rural, or is within the Metropolitan Area.*

4. *The "Localities" adopted for the purpose of these statistics should be areas of known population; such as parishes, groups of parishes, townships or wards.*

As stated at the head of the first column in each Table, *Public Institutions* should be regarded as separate localities, and the deaths in them should be separately recorded. Workhouses, Hospitals, Infirmarys, Asylums, and other establishments into which numbers of people, and especially of sick people, are received are Public Institutions for the purpose of these statistics.

5. *The deaths which have to be classified in this Table (A), and summed up in the horizontal line of "Totals," are the whole of those registered as having actually occurred in the several localities comprised within the Division or District. But the registered number of deaths frequently requires correction before it can give an exact view of the mortality of a Division or District; and the two lowest horizontal lines are provided for the purpose of enabling Medical Officers of Health to indicate, to the best of their ability, what the extent of such corrections should be. Details concerning the corrective figures, e.g., the institutions that have been considered, or the particular localities to which corrections apply, may appear in the text of the report or in supplementary tables.*

Area and Population of the District or
Division to which this Return relates.

Area in Acres 8.399

Population (1891) 13.109

Death Rates.	General	<u>18.2</u>	{ per 1,000 Population, esti- mated to middle of 1895.
	Infant (under one year of age)	<u>197</u>	

In recording the facts under the various headings of Tables A and B, attention has been given to the notes endorsed on the Tables.

[Signature] Medical Officer of Health.

(Date) 10th February, 1896.